abcam

ab239755

Anti-CD7 antibody [EPR22065] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR22065
Purification technique	Affinity purification Protein A
Concentration	1.047 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

WB

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information CD7

Function Transmembrane glycoprotein expressed by T-cells and natural killer (NK) cells and their precursors (PubMed:7506726). Plays a costimulatory role in T-cell activation upon binding to its ligand K12/SECTM1 (PubMed:10652336). In turn, mediates the production of cytokines such as IL-2 (PubMed:1709867). On resting NK-cells, CD7 activation results in a significant induction of interferon-gamma levels (PubMed:7506726).

Storage

Shipped at conditions Blue Ice

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab239755 is the carrier-free version of ab224194.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD7 also known as Leu-9 or GP40 is a cell surface protein with a mass of approximately 40 kDa. The target is mainly expressed on T cells and NK cells and can be found during early T-cell development. Researchers also report CD7 expression in some B cell lineage progenitors. The CD7 function involves mediating cell signal transduction which contributes to the activation and differentiation of immune cells making it an important target in immunology studies.

Biological function summary	CD7 plays a role in modulating interactions between immune cells without being part of a larger complex. It bridges interactions promoting immune responses by influencing T cell proliferation and cytokine production. CD7 control is important in regulating immune response intensity and provides an essential checkpoint in immune system modulation. Variations in CD7 function can significantly influence immune cell behavior impacting host defense mechanisms.
Pathways	CD7 participates in immune signaling pathways such as the T-cell receptor (TCR) signaling pathway. This pathway is essential for T cell activation and involves proteins like CD3 and ZAP-70 which work together with CD7 to transduce activation signals. Alterations in the CD7 pathway can affect the downstream signaling events leading to changes in immune cell activation and function.
Associated diseases and disorders	Aberrations in CD7 expression or function link to conditions like T-cell acute lymphoblastic leukemia (T-ALL) and certain autoimmune diseases. In T-ALL abnormal CD7 expression serves as an indicator for diagnosis and disease progression monitoring. CD7 also interacts with proteins such as CD45 and CD3 which play roles in leukemogenesis and immune system dysregulation. Studies also explore anti-CD7 strategies for therapeutic interventions aiming to modulate its activity for treating these conditions effectively.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

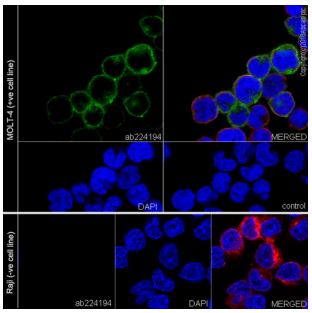
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

3 product images



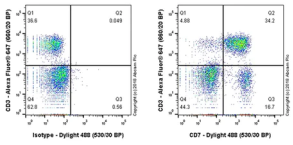
Immunocytochemistry/ Immunofluorescence - Anti-CD7 antibody [EPR22065] - BSA and Azide free (ab239755)

CD7 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD7 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized MOLT-4 (human lymphoblastic leukemia cell line) cells labeling CD7 with ab224194 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing Membranous staining in MOLT-4 cells. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red).
PDS only control: Used PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

Negative control: Raji (PMID: 16332967).

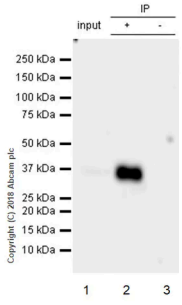
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab224194).



Flow Cytometry - Anti-CD7 antibody [EPR22065] - BSA and Azide free (ab239755)

CD7 Flow Cytometry staining using rabbit Anti-CD7 antibody

Human PBMCs (peripheral blood mononuclear cells) were stained with Alexa Fluor® 647-conjugated anti-human CD3 and rabbit IgG - ab172730 (Left) or CD7 - ab224194 at 1/500 (Right). Goat anti-Rabbit IgG Fc (Dylight® 488, ab98462), at 1/2000 dilution was used as the secondary antibody. Data shown was gated on viable cells. The expression pattern of CD7 is consistent with literature. (PMID: 3260936)
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab224194).



Immunoprecipitation - Anti-CD7 antibody [EPR22065] - BSA and Azide free (ab239755)

CD7 was immunoprecipitated from 0.35 mg of human tonsil lysate with ab224194 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab224194 at 1/500 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/1000 dilution.
Lane 1: Human tonsil lysate 10 µg (Input).
Lane 2: ab224194 IP in human tonsil lysate lysate (+).
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab224194 in human tonsil lysate (-).

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 30 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab224194).

All lanes:
Immunoprecipitation - Anti-CD7 antibody [EPR22065] (ab224194)

Predicted band size: 25 kDa

Observed band size: 37 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.